

| CRITICAL PATH ROADMAP DISCIPLINE(S) | PRIMARY SPECIES / TYPE | GROUND EXPERIMENT TITLE | NASA OBPR - TASK BOOK | | | | | | | |
|---|------------------------------|---|------------------------------------|------|------|------|------|------|------|------|
| | | | Year Experiment Was Listed in Book | | | | | | | |
| | | | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
| Multi-system (Cross Risk) Alterations; Immunology, Infection & Hematology | Animal | Calbindins and Apoptosis After Short-Term Space Flight | | | | 1998 | 1999 | 2000 | | |
| Immunology, Infection & Hematology; Cardiovascular Alterations | Animal | Effect of Microgravity on Vascular Cell Function | 1995 | 1996 | 1997 | 1998 | | | | |
| Immunology, Infection & Hematology; Muscle Alterations & Atrophy | Animal | Effects of Hind Limb Suspension on Local Inflammation and Wound Healing in a Murine Model | | | | | | 2000 | 2001 | 2002 |
| Bone Loss; Immunology, Infection & Hematology; Clinical Capabilities; Muscle Alterations & Atrophy | Animal | Healing Response of Injured Rodent Knee Ligaments to Hindlimb Unweighting and the Therapeutic Efficacy of Growth Hormone (This Task began in FY2000) | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology; Neurovestibular Adaptation | Animal | Immunological Influences on the Vestibular Sensory Organs | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Animal | Immunotoxicity of Hydrazine | | | 1997 | | | | | |
| Immunology, Infection & Hematology; Food & Nutrition | Animal | Nutritional Immunomodulation in Microgravity: Application of Ground-based In Vivo and In Vitro Bioreactor Models to Study Role and Mechanisms of Supplemental | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Animal | Suspension, the HPA Axis and Resistance to Infection | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Animal | The Effects of Microgravity on the Development of the Immune System | | | | | | | 2001 | 2002 |
| Radiation Effects; Immunology, Infection & Hematology | Animal | Transcription Factor Evolution and Lymphocyte Origins (This Task began in FY2000) | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Animal | Virus Infections and Mucosal Immunity | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | An Analysis of Transcriptional and Post-Transcriptional Regulation of Cyclin Expression using a New Technology for the Production of Minimally-Disturbed Synchronous Cells | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Determining Cellular Responsiveness to Low Gravity Environments; Determining Lymphocyte Responsiveness to Low Gravity Environments | | | 1997 | 1998 | 1999 | 2000 | | |
| Immunology, Infection & Hematology | Cells | Effect of Microgravity on the Development of the Immune System | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Effect of Simulated Microgravity on Activated T Cell Gene Transcription; Effect of Simulated Microgravity on Activated T Cell Transcription; The Effect of Simulated Microgravity on Activated T-Cell Gene Transcription | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Evaluating Oxidative Stress in Virally-Infected Cells in Simulated Microgravity - Victor Rodgers | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Gravity and Integrin Mediated Human Lymphocyte Adhesion | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Microgravity Effects of Lymphocyte Adhesion and Motility; Rice NSCORT in Gravitational Biology: Microgravity Effects on Lymphocyte Adhesion and Motility | | | | 1998 | 1999 | 2000 | | 2002 |
| Immunology, Infection & Hematology | Cells | Microgravity Induced Changes in Lymphocyte Movement Through Interstitium | | | | 1998 | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Neocytolysis: Mechanisms and Limitations | | | | 1998 | 1999 | 2000 | | |
| Immunology, Infection & Hematology | Cells | NSCORT: Gravitational Biology; Gravitational Biology (Dr. McIntire) | | 1996 | 1997 | 1998 | N/A | N/A | 2001 | |
| Immunology, Infection & Hematology | Cells | NSCORT: The Center for Gravitational Studies in Cellular and Developmental Biology | 1995 | 1996 | 1997 | | | | | |
| Immunology, Infection & Hematology | Cells | RRR-alpha-tocopheryl Succinate Modulation of TGF-beta and the TGF-beta Receptors on Human Myelocytic Leukemia (HL-60) Cells | | | 1997 | | | | | |
| Immunology, Infection & Hematology | Cells | Studies of Cell Cycle Progression of Activated T-Cells in Clinorotation | | | | 1998 | 1999 | | | |
| Immunology, Infection & Hematology | Cells | T Cell Activation and Signal Transduction in Simulated Microgravity | | | | 1998 | 1999 | 2000 | 2001 | |
| Immunology, Infection & Hematology | Cells | The Effects of Microgravity on Fibroblast Migration and Thy-1 Surface Expression | | | | | | | | 2002 |
| Immunology, Infection & Hematology | Cells | The Interactive Coupling of Cytoskeleton and Signal Transduction Elements in Gravity Sensitivity of T-Cell Activation (This Task began in FY2000) | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Cells | Use of NASA Bioreactors in a Novel Scheme for Immunization Against Cancer | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology | Human | Effects of Microgravity on Cell Mediated Immunity and Reactivation of Latent Viral Infections | | | 1997 | 1998 | | | | |
| Immunology, Infection & Hematology | Human | Immune Function and Reactivation of Latent Viruses | | | | 1998 | 1999 | 2000 | | |
| Human Behavior & Performance; Immunology, Infection & Hematology | Human | Space Flight Immunodeficiency | | | | 1998 | 1999 | 2000 | 2001 | 2002 |
| Human Behavior & Performance; Immunology, Infection & Hematology | Human | Sustained Partial Sleep Deprivation: Effects on Immune Modulation and Growth Factors | | | | 1998 | 1999 | 2000 | | |
| Immunology, Infection & Hematology | Microbe | Effect of Growth and Starvation under Simulated Microgravity on Bacterial Stress and Secondary Metabolite Formation Responses Using Rotating Wall Bioreactors; Effect of Growth Starvation under Simulated Microgravity on Bacterial Stress and Secondary Metabolite formation Response using Rotating Wall Bioreactor | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Microbe | Effect of Simulated Microgravity on Gene Expression in the Enteric Pathogen Salmonella typhimurium | | | | | 1999 | 2000 | 2001 | 2002 |
| Immunology, Infection & Hematology | Microbe | Effects of Oscillatory Acceleration on Bacterial Proliferation and Response to Antibiotics | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology; Environmental Health; Advanced Life Support | Microbe | Microorganisms in the Spacecraft Environment | | | | | | | 2001 | 2002 |
| Immunology, Infection & Hematology; Environmental Health | Microbe | Spaceflight Effects on Microbial Susceptibility to Antibiotics | 1995 | 1996 | 1997 | 1998 | | | | |
| Immunology, Infection & Hematology | Other | New Statistical Methods for Immunoassay Data | 1995 | 1996 | 1997 | | | | | |